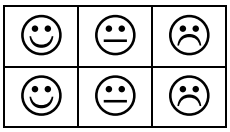
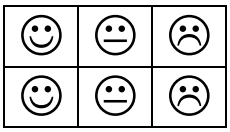
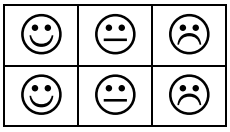
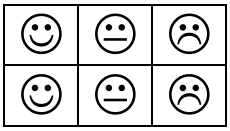
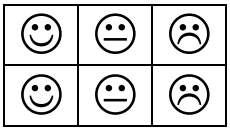
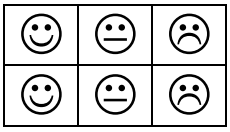
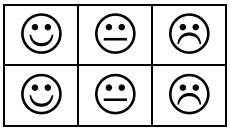
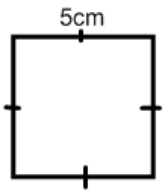
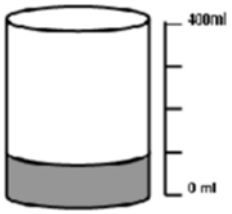
S4 Numeracy

Topic	I can?	Example of Evidence
A: I can understand mathematical notation.		Write down the meaning of: =, +, -, x, ÷, $\frac{a}{b}$, <, ≤, >, ≥, ( ), %, ·
B: I can choose appropriate units of measure for length, volume and weight.		Choose the appropriate unit for measuring: (a) The distance between two towns (b) The volume of a chemical solution in a beaker (c) The weight of a lorry (d) The weight of a jotter
C: I know how many smaller units of measure are in a bigger unit of measure.		Copy and complete: 1 week = ___ days, 1 day = ___ hours, 1 hour = _____ minutes 1 kg = ___g 1 km = ____m, 1m = ___ cm, 1cm = ___mm
D: I can add and subtract integers.		Find: • 87 – 48 • -34 + 50 • 29 – (-12)
E: I can multiply.		Find: • 756 x 8 • 3921 x 4 • 70 x 4022
F: I can divide.		Find: • 921 ÷ 3 • 823 ÷ 10 • 399 ÷ 100
G: I know when to add, subtract, multiply or divide.		Write down the type of calculation needed to find each answer. • A farmer uses 1.5 tonnes of fertiliser for every hectare of land. How much fertiliser is needed for 20 hectares? • A shop keeper buys sweets in 2kg cartons and splits them in 100g bags. How many bags of sweets can be made from one carton? • Find the total cost for a bottle of water which costs 89p, an apple for 45p and a sandwich for £2.49. • Andrew is 190cm tall and Lauren is 175cm tall. Find the difference in their heights.

H: I can round numbers to 1 significant figure or up to 2 decimal places.	☺ 😐 ☹ ☺ 😐 ☹	Round to 1 significant figure: (a) 154 876 (b) 521 (c) 0.00819 Round to 2 decimal place: (a) 4.2981 (b) 0.581
I: I can find simple fractions and percentages of quantities.	☺ 😐 ☹ ☺ 😐 ☹	Find: • $\frac{1}{4}$ of 36p • $\frac{1}{3}$ of 252m • 50% of £92 • 20% of 120kg
J: I can calculate percentage increase and decrease.	☺ 😐 ☹ ☺ 😐 ☹	A washing machine is discounted from £450 by 20%. Find: (a) The discount (b) The new price
K: I can find equivalent fractions, decimals and percentages.	☺ 😐 ☹ ☺ 😐 ☹	Complete: Fraction: $\frac{1}{3}$ | | | Decimal: | 0.4 | Percentage: | | 65%
L: I can calculate rates.	☺ 😐 ☹ ☺ 😐 ☹	Paul uses 600 minutes on his mobile during a 30-day month. Calculate how the rate of how many minutes he uses per day.
M: I can calculate distance given time and speed.	☺ 😐 ☹ ☺ 😐 ☹	Find the distance travelled by a train going at 120km/h for 3 hours.
N: I can calculate an interval of time when the times are given in 12 hour or 24 hour clock.	☺ 😐 ☹ ☺ 😐 ☹	A film started at 7:45pm and finished at 10:10pm. For how long did the film last?
O: I can calculate the volume of a cube and cuboid, area of a rectangle and square and perimeter of a shape with straight edges.	☺ 😐 ☹ ☺ 😐 ☹	• Calculate the volume of a cuboid with dimensions 3m by 2m by 5m. • Find the area and perimeter of the square. 

P: I can do calculations involving ratio and proportion.	☺ 😐 ☹ ☺ 😐 ☹	• Share £20 in the ratio 2:3. • A school trip requires the ratio of staff to pupils to be at least 1:12. If 45 pupils are going, how many staff are needed? • Five oranges cost £1.75. How much would 7 oranges cost?
Q: I can use the appropriate instruments to measure length, volume, weight, temperature and angle.	☺ 😐 ☹ ☺ 😐 ☹	State the appropriate instrument to measure: (a) The length of the assembly hall (b) The volume of water in a cup (c) 5ml of medicine (d) The bearing of one munro to another, measured on a map.
R: I can read from a scale on an instrument of measure.	☺ 😐 ☹ ☺ 😐 ☹	How much liquid is in the beaker? 
S: I can convert between different units of measure.	☺ 😐 ☹ ☺ 😐 ☹	Change the following to the given units: (a) 3.5cm to mm (b) 2250ml to litres (c) 1.2 kg to g
T: I can use the information I have found to make an informed decision.	☺ 😐 ☹ ☺ 😐 ☹	Doctor A performed 356 heart valve operations with a success rate of 89%. Doctor B has performed 5 heart valve operations, all successfully. Which doctor would you want to operate on you? Give a reason for your answer.
U: I can use an answer to make a decision and justify my answer.	☺ 😐 ☹ ☺ 😐 ☹	Over a six hour period the temperature in a hospital ward was recorded every hour. They were (in degrees Celsius): 19, 21, 20, 22, 17, 21. (a) Calculate the mean and range. (b) Hospital wards have to maintain a steady temperature of 20^{o}C. Do you think the temperatures were acceptable? Justify your answer.

Key words

Word	Meaning or use